

## **What is claimed is:**

**[Claim 1] 1. A golf club head comprising:**

**a major body composed of a metal material, the major body having front wall section, a return section, a sole section, a ribbon section and a ledge section, the front wall section has an opening, the return section extending a distance ranging 0.1 inch to 2.75 inches from a perimeter of the front wall section, the major body having a mass ranging from 140 grams to 200 grams;**

**a striking plate insert positioned in the opening of the front wall section of the major body, the striking plate insert having a thickness in the range of 0.010 inch to 0.250 inch;**

**a minor body having a crown section and a ribbon section, the minor body attached to the ledge section of the major body, the minor body having a mass ranging from 4 grams to 50 grams; and**

**a stiffening member disposed on an interior surface of the major body;**

**wherein the golf club head has a volume ranging from 290 cubic centimeters to 600 cubic centimeters.**

**[Claim 2]** 2. The golf club head according to claim 1 wherein the striking plate insert is composed of a metal material.

**[Claim 3]** 3. The golf club head according to claim 1 wherein the minor body is composed of a metal material having a density lower than the density of the material of the major body.

**[Claim 4]** 4. The golf club head according to claim 1 wherein the minor body is composed of a plurality of plies of pre-preg material.

**[Claim 5]** 5. The golf club head according to claim 1 wherein the ledge section is inward a distance ranging from 0.005 inch to 0.020 inch from an exterior surface of the major body.

**[Claim 6]** 6. The golf club head according to claim 1 wherein the striking plate insert has a plurality of concentric regions of varying thickness.

**[Claim 7]** 7. The golf club head according to claim 1 wherein the major body is composed of a cast titanium alloy material, the striking plate insert is composed of a formed titanium alloy, and the minor body is composed of a composite material.

**[Claim 8]** 8. The golf club head according to claim 1 wherein the golf club head has a first resonant frequency on the sole section of at least 2200 Hertz.

**[Claim 9]** 9 The golf club head according to claim 1 wherein the golf club head has a second resonant frequency on the sole section of at least 2550 Hertz.

**[Claim 10]** 10. The golf club head according to claim 1 wherein the golf club head has a first resonant frequency on the sole section of at least 2700 Hertz.

**[Claim 11]** 11. The golf club head according to claim 1 wherein the golf club head has a second resonant frequency on the sole section of at least 3400 Hertz.

[Claim 12] 12. The golf club head according to claim 1 wherein the golf club head has a volume ranging from 350 cubic centimeters to 495 cubic centimeters.

[Claim 13] 13. The golf club head according to claim 1 wherein the moment of inertia about the Izz axis through the center of gravity of the golf club head ranges from 2800 grams– centimeters squared to 5000 grams– centimeters squared.

[Claim 14] 14. A golf club head comprising:

a major body composed of a cast titanium alloy material, the major body having a front wall section, a return section, a sole section, a ribbon section and a ledge section, the return section extending a distance ranging 0.10 inch to 2.75 inches from a perimeter of the front wall section, the ledge section is inward a distance ranging from 0.005 inch to 0.020 inch from an exterior surface of the major body;

a striking plate insert positioned in the opening of the front wall section of the major body, the striking plate insert having a thickness in the range of 0.010 inch to 0.250 inch, the striking plate insert composed of a formed titanium alloy material;

a minor body having a crown section and a ribbon section, the minor body attached to the ledge section of the major body with a liquid

adhesive, the minor body having a thickness ranging from 0.010 inch to 0.070 inch, the minor body composed of a plurality of plies of pre-preg material;

a plurality of stiffening members disposed on an interior surface of the sole section of the major body, each of the stiffening members extending along a majority of the length of the sole section and having a thickness of approximately 0.375 inch;

wherein the moment of inertia about the  $I_{zz}$  axis through the center of gravity of the golf club head that ranges from 2800 to 5000 grams-centimeters squared, and the moment of inertia about the  $I_{yy}$  axis through the center of gravity of the golf club head that ranges from 2000 to 3500 grams-centimeters squared, and wherein the golf club head the golf club head has a first resonant frequency on the sole section of at least 2200 Hertz, and a second resonant frequency on the sole section of at least 2550 Hertz.

[Claim 15] 15. A golf club head comprising:

a major body composed of a cast titanium alloy material, the major body having a front wall section, a return section, a sole section, a ribbon section and a ledge section, the return section extending a distance ranging

0.10 inch to 2.75 inches from a perimeter of the front wall section, the ledge section is inward a distance ranging from 0.005 inch to 0.020 inch from an exterior surface of the major body;

a striking plate insert positioned in the opening of the front wall section of the major body, the striking plate insert having a thickness in the range of 0.010 inch to 0.250 inch, the striking plate insert composed of a formed titanium alloy material;

a minor body having a crown section and a ribbon section, the minor body attached to the ledge section of the major body with a liquid adhesive, the minor body having a thickness ranging from 0.010 inch to 0.070 inch, the minor body composed of a magnesium alloy material;

a plurality of stiffening members disposed on an interior surface of the sole section of the major body, each of the stiffening members extending along a majority of the length of the sole section and having a thickness of approximately 0.375 inch;

wherein the moment of inertia about the  $I_{zz}$  axis through the center of gravity of the golf club head that ranges from 2800 to 5000 grams-centimeters

squared, and the moment of inertia about the lyy axis through the center of gravity of the golf club head that ranges from 2000 to 3500 grams-centimeters squared, and wherein the golf club head the golf club head has a first resonant frequency on the sole section of at least 2200 Hertz, and a second resonant frequency on the sole section of at least 2550 Hertz.

[Claim 16] 16. A golf club head comprising:

a major body composed of a cast titanium alloy material, the major body having a front wall section, a return section, a sole section, a ribbon section and a ledge section, the return section extending a distance ranging 0.10 inch to 2.75 inches from a perimeter of the front wall section, the ledge section is inward a distance ranging from 0.005 inch to 0.020 inch from an exterior surface of the major body;

a striking plate insert positioned in the opening of the front wall section of the major body, the striking plate insert having a thickness in the range of 0.010 inch to 0.250 inch, the striking plate insert composed of a formed titanium alloy material;

a minor body having a crown section and a ribbon section, the minor body attached to the ledge section of the major body with a liquid adhesive, the minor body having a thickness ranging from 0.010 inch to 0.070 inch, the minor body composed of an aluminum alloy material;

a plurality of stiffening members disposed on an interior surface of the sole section of the major body, each of the stiffening members extending along a majority of the length of the sole section and having a thickness of approximately 0.375 inch;

wherein the moment of inertia about the  $I_{zz}$  axis through the center of gravity of the golf club head that ranges from 2800 to 5000 grams-centimeters squared, and the moment of inertia about the  $I_{yy}$  axis through the center of gravity of the golf club head that ranges from 2000 to 3500 grams-centimeters squared, and wherein the golf club head the golf club head has a first resonant frequency on the sole section of at least 2200 Hertz, and a second resonant frequency on the sole section of at least 2550 Hertz.